USING GEOGRAPHIC INFORMATION SYSTEMS TO ANALYZE BALD EAGLE HABITAT USE IN THE CHESAPEAKE BAY, USA

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We trapped bald eagles (*Haliaeetus leucocephalus*) using padded leghold traps and floating noosefish and by climbing to nests. Eagles were fitted with solar-powered radio transmitters, in a backpack configuration. The package was attached using teflon ribbon sewed near the sternum. Eagles were relocated ($N > 1000$) by using Cessna fixed-wing aircraft fitted with strut-mounted yagi antennas. We homed on the radio-signal to obtain a visual location and then plotted eagles' positions on 1:24 000 maps. UTM coordinates were digitized from the maps and stored in a file on our Micro-Vax III mini computer. We used ARC-INFO to overlay eagle locations on several different habitat data bases. We used ARC-INFO to calculate the amount of habitat available in various classes, which facilitated use vs. availability analyses. Telemetry used in conjunction with GIS databases has great potential for analyzing habitat use by raptors with very large home ranges.

THE CAPE MAY RAPTOR BANDING PROJECT: 25-YEAR SUMMARY

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Since 1967, more than 81 000 migrating diurnal raptors have been captured and banded at Cape May Point, NJ, U.S.A. The research objective is to determine where these raptors are breeding and wintering, as well as their migration pathways. Data on measurements, age, sex, and condition have been gathered from the captured hawks. More than 1200 band recoveries have been reported, but only 147 previously banded raptors were captured and only 20 raptors were recaptured in subsequent years. A Common Kestrel (*Falco tinnunculus*) was captured in 1972 (second North American record). Ten Swainson's Hawks (*Buteo swainsoni*) have been captured from 1973 to present; one of these was recovered in Nova Scotia. Recovery data and most of the banding data are on computer data bases. Data are presented by species on the number banded and recovered and age and sex ratios. Published results are summarized. Captured raptors were made available to other raptor projects, including studies of the U.S. Fish and Wildlife Service, New Jersey Endangered Species and Non-game Program, New Jersey Audubon Society, University of Miami (Florida), University of Pennsylvania Veterinary School, Stockton State College, Tufts University, Utah State University, and Virginia Tech. Many raptor biologists (some from other countries) have received intensive training on capture techniques, age and sex determination, and behavior of raptors. Biologists from more than a dozen countries have observed the project operation. More than 35 000 people have attended demonstrations using banded raptors for public education, and heard our raptor conservation message. Funding is primarily from private sources, particularly from the WindSeine project of the CMBO. Most of the field work is conducted by highly qualified volunteers. Future research directions and publications are discussed.

RAPTOR EDUCATION—COMPLETING THE CIRCLE OF SPECIES SURVIVAL PLANS

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It has been said that "All great environmental battles will be won or lost in this decade." As depressing as this sounds, there are still numerous positive aspects of conservation that are being conducted about which the public is unaware. Valuable field research is helping develop ecosystem management plans and species survival programs. Making the general public understand raptors and their place in our modern society has fallen on the shoulders of the raptor educators. Any comprehensive conservation programs for raptors must include field biologists working closely with educators. The World Bird Sanctuary (WBS) has developed an extensive education program that is designed to make the public more aware of what they must do to preserve raptors. Programs from preschool to senior citizens allow WBS to reach over 2 million people each year. Using data provided to us by field biologists, these programs are an effective tool in cooperative preservation programs for raptors. These programs, their design and complexity, will be discussed in detail.

MANAGEMENT OF A BALD EAGLE COMMUNAL ROOST IN MIXED-CONIFER FORESTS OF SOUTHERN OREGON

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Traditional management of bald eagle communal roosts has been confined primarily to seasonal restrictions on human activity and protection from habitat alterations. However, simply prohibiting direct disturbance of roosts may not preserve essential habitat characteristics over the long-term, especially in areas where natural disturbances (e.g., fire) have historically shaped stand composition and